



INVESTOR IN PEOPLE

The Patent Office  
Concept House  
Cardiff Road  
Newport  
South Wales  
NP10 8QQ

REC'D 28 MAY 2004

WIPO

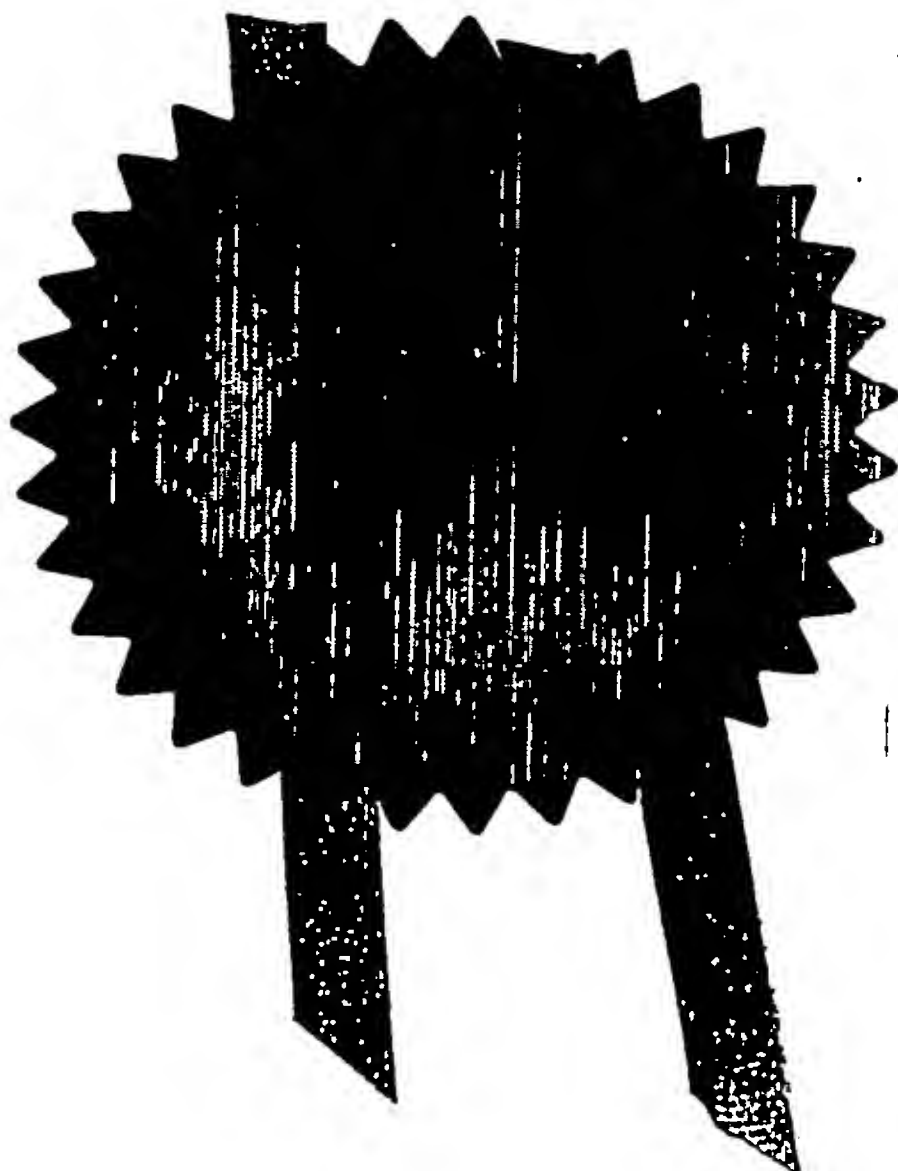
PCT

I, the undersigned, being an officer duly authorised in accordance with Section 74(1) and (4) of the Deregulation & Contracting Out Act 1994, to sign and issue certificates on behalf of the Comptroller-General, hereby certify that annexed hereto is a true copy of the documents as originally filed in connection with the patent application identified therein.

In accordance with the Patents (Companies Re-registration) Rules 1982, if a company named in this certificate and any accompanying documents has re-registered under the Companies Act 1980 with the same name as that with which it was registered immediately before re-registration save for the substitution as, or inclusion as, the last part of the name of the words "public limited company" or their equivalents in Welsh, references to the name of the company in this certificate and any accompanying documents shall be treated as references to the name with which it is so re-registered.

In accordance with the rules, the words "public limited company" may be replaced by p.l.c., plc, P.L.C. or PLC.

Re-registration under the Companies Act does not constitute a new legal entity but merely subjects the company to certain additional company law rules.



Signed

*W. Evans*

Dated

18 May 2004

**PRIORITY  
DOCUMENT**

SUBMITTED OR TRANSMITTED IN  
COMPLIANCE WITH RULE 17.1(a) OR (b)

BEST AVAILABLE COPY

THE PATENT OFFICE

4 APR 2003



177

04APR03 E797689-1-269640  
P01/7700 0.00-0307763.3

# Request for grant of a patent

(See the notes on the back of this form. You can also get an explanatory leaflet from the Patent Office to help you fill in this form)

4 APR 2003

The Patent Office

Cardiff Road  
Newport  
South Wales  
NP10 8QQ

1. Your reference

2. Patent application number

(The Patent Office will fill in this part)

0307763.3

3. Full name, address and postcode of the or of each applicant (underline all surnames)

The Zap Corporation (UK) Ltd  
23 Derwent Crescent  
Stanmore  
Middlesex HA7 2NE

Patents ADP number (if you know it)

If the applicant is a corporate body, give the country/state of its incorporation

GB

8604266001

4. Title of the invention

SYSTEM AND METHOD OF BROADCASTING  
ADVERTISEMENTS

5. Name of your agent (if you have one)

"Address for service" in the United Kingdom to which all correspondence should be sent (including the postcode)

i.p.21 Limited  
Norwich Research Park  
Colney  
NORWICH NR4 7UT

Patents ADP number (if you know it)

8060758001

6. If you are declaring priority from one or more earlier patent applications, give the country and the date of filing of the or of each of these earlier applications and (if you know it) the or each application number

Country

Priority application number  
(if you know it)

Date of filing  
(day / month / year)

7. If this application is divided or otherwise derived from an earlier UK application, give the number and the filing date of the earlier application

Number of earlier application

Date of filing  
(day / month / year)

8. Is a statement of inventorship and of right to grant of a patent required in support of this request? (Answer 'Yes' if:

YES

- a) any applicant named in part 3 is not an inventor, or
  - b) there is an inventor who is not named as an applicant, or
  - c) any named applicant is a corporate body.
- See note (d))

# Patents Form 1/77

9. Enter the number of sheets for any of the following items you are filing with this form. Do not count copies of the same document

Continuation sheets of this form	0
Description	7
Claim(s)	1
Abstract	1
Drawing(s)	2

10. If you are also filing any of the following, state how many against each item.

Priority documents

Translations of priority documents

Statement of inventorship and right to grant of a patent (*Patents Form 7/77*)

Request for preliminary examination and search (*Patents Form 9/77*)

Request for substantive examination (*Patents Form 10/77*)

Any other documents  
(*please specify*)

11. I/We request the grant of a patent on the basis of this application.

Signature

*Z. p. 21 Limited  
by MH.*

Date

03/04/03

12. Name and daytime telephone number of person to contact in the United Kingdom

MELANIE HARVEY

01603 457008

## Warning

*After an application for a patent has been filed, the Comptroller of the Patent Office will consider whether publication or communication of the invention should be prohibited or restricted under Section 22 of the Patents Act 1977. You will be informed if it is necessary to prohibit or restrict your invention in this way. Furthermore, if you live in the United Kingdom, Section 23 of the Patents Act 1977 stops you from applying for a patent abroad without first getting written permission from the Patent Office unless an application has been filed at least 6 weeks beforehand in the United Kingdom for a patent for the same invention and either no direction prohibiting publication or communication has been given, or any such direction has been revoked.*

## Notes

- If you need help to fill in this form or you have any questions, please contact the Patent Office on 08459 500505.*
- Write your answers in capital letters using black ink or you may type them.*
- If there is not enough space for all the relevant details on any part of this form, please continue on a separate sheet of paper and write "see continuation sheet" in the relevant part(s). Any continuation sheet should be attached to this form.*
- If you have answered 'Yes' Patents Form 7/77 will need to be filed.*
- Once you have filled in the form you must remember to sign and date it.*
- For details of the fee and ways to pay please contact the Patent Office.*

10      **SYSTEM AND METHOD OF BROADCASTING ADVERTISEMENTS**

Field of the Invention

15      The invention relates to the electronic capture, analysis and delivery of mass media and consumer information and in particular to a system and method of broadcasting advertisements.

Background to the Invention

20      Present mass media advertising models assign particular areas of interest to certain classes of consumers based on available demographic information. From this starting point mechanisms are developed to deliver the content to as many potential consumers as possible whether:

- 25
  - Over the air (radio stations);
  - Via television (television networks);
  - Via cable and/or satellite transmission; or by
  - Mass distribution of printed copies (newspapers and magazines).

30

The main drawback with this approach is the lack of commercial efficiency in the existing models. Without reliable demographic data on audiences and/or subscribers, individualisation and personalised targeting remains a tough challenge for the whole advertising industry. A too narrowly focused

advertising campaign runs the risk of alienating potential consumers and a too broadly focused campaign runs the risk of not attracting enough consumers as it may not be appealing enough.

5 Advertisers have always attempted to use targeting methodologies – direct mailing is one obvious example – to better identify and reach potential prospects or specific classification groups of purchasers. This has always been difficult in television where the underlying premise of broadcasting – one to many – has always prevailed. The attempts to match viewers to advertised products rely on assumptions about stereotypes rather than specific analysis and interpretations of individual consumer viewing patterns.

15 This absence of accurate prospect profiling data means that identifying leveraging and retaining product responsive television audiences remains a largely unachieved priority for the advertising industry. This dilemma for television is made even more significant by advances in technology that increase the overall number of channel mix options available to the advertising campaign strategist i.e. message delivery at the touch of a button direct to a mobile phone.

20 Individuals at home, work or on the move now come into contact with an ever expanding number of different forms of mass media. Recent additions to the established and traditional options include:

- 25       ▪ Broadband;
- Digital television;
- digital radio;
- webcasting;
- internet audio streams; and
- 30       ▪ internet video streams.



The problem therefore is that:

- advertisers globally would prefer to accurately target individual consumers based on an improved understanding of their propensity to purchase particular types of product and in order to maximise the overall effectiveness of their industry;
- consumers would prefer to receive advertisements relating to products of personal interest rather than campaigns which have no relevance. At present there is no way of electronically matching the viewer to the playout material;
- broadcasters need to capture accurate channel and programme market share data since this forms a valuable currency for their industry. At present there is no net-centric measurement. It is further anticipated that network operators will become tomorrows broadcasters.

An objective of the present invention is to provide such a system.

#### Summary of the Invention

In its broadest aspect, the invention provides a method of, or a system for, broadcasting inter-programme and/or intra-programme advertisements to a viewing or listening audience, in which a given advertisement's target audience profile is matched to an obtained real audience profile to dictate not only that certain advertisements shall be broadcast only between and/or during certain programmes but also that certain individual members of, or groups of members within, the programme-receiving audience may receive one advertisement, during and/or between certain programmes, whilst other audience members or member groups receive a different advertisement, in one or more of the same respective advert 'slots', whilst watching or listening to the same broadcast.

Such a broad definition of the overall concept is applicable to the invention irrespective of which type of television viewing platform is being used.

5 Although primarily designed for deployment within future broadband television environments, the inherent intelligence will make the invention eminently suitable for implementation in existing cable, terrestrial and satellite networks as well.

10 Such an arrangement largely overcomes (or at least mitigates) the drawbacks previously listed with respect to known mass media advertising models. In addition to the completely new design of an analysis tool and a database management engine the invention provides a software based link which brings both component parts of a complex value chain together and then automates  
15 playout of TV commercials as part of an end to end process.

#### Brief Description of the Drawings

A preferred embodiment of the present invention will now be described by way of example and with reference to the accompanying drawing in which:

20 Figure 1 shows a schematic representation of an operational system.

Figure 2 shows a block representation of a typical system architecture.

#### Detailed Description of the Invention

25 A system and method of linking consumers and advertising campaigns with the aim to provide individual targeted advertising is described.

30 We (i.e. the general public) think we are unique individuals but we unconsciously reveal elements of our character in everything that we do – from what we watch, read, listen to, wear, and what we eat. When these are collected together a person's character can be analysed, assigned a 'type' and used to successfully determine a propensity to buy certain types of product.

The system incorporating the method as defined by the present invention uses a points based system to obtain multiple layering of behavioural habits – the true secret of accurate targeting. Real live input feeds from continually refreshed mainstream broadcast sources are collated on an individual location basis to form a managed database which is used as an analysis platform to collate and develop these classification groupings. These subsequently form the basis and the main trigger for the automated playout of advertising material.

In operation, the service provider transmits an interleaved data stream to a transceiver. The incoming signal is decrypted and displayed as either an audio data stream, a video data stream, or a combined audio and video data stream on a variety of devices.

The method steps are:

- Track and read the viewing habits of individual households in a given area;
- Capture this information either locally or remotely in a deep level network environment;
- Analyse and assign subsequent captured data into classification groups;
- Create an output using this data which can be used as a decision tree to determine the suitability of particular individual households – via their classification group status – to receive particular types of advertising material according to that segmentation;
- Separately classify all types of advertising into new numerically tagged segments (NTS codes). These groupings will support the onward addressing of advertising material to appropriate target destinations;
- Use this output seamlessly within the software to provide listings of household identifications via destination addressing which can be used to direct advertising material from those central servers out to potential prospects using the new NTS codes;



- Co-ordinate the play out of advertising from centrally located broadcast servers out to end consumers using the outputs described. This will involve the manipulation and management of individual broadcast streams.

5

Using television as an example medium a preferred embodiment of the present invention is will now be described.

10

An electrical signal of defined structure (interleaved audio and/or video data streams) is fed into households covered by a broadcasting network having at least one television viewing means which is able to detect, interpret and convert the data stream into a television picture containing programmes, trailers and advertisements.

15

A viewing profile is obtained as a result of what is displayed on the television. Standard audience ratings are obtained by taking a snapshot of how many televisions are tuned into a certain channel at a certain instance in time – this only usefully tells you what channel is on not who might be watching it.

20

By interrogating a Set Top Box (STB) connected to the television a more accurate picture of the viewer can be built up over time and has the added feature that it is continually being updated.

25

STB's have unique electronic addresses which can be used to uniquely identify the television connected to the STB. As the viewing profile is formed the electronic address of the STB is its unique identifier. Substantially similar profiles are grouped into viewing clusters.

30

Advertising campaigns are categorised according to content and predetermined viewing profiles and reclassified by integrating Numerically Tagged Segment (NTS) codes into the bank of advertising campaigns pipelined for transmission.

( NTS codes are associated with viewing clusters resulting in automatic play out of advertisements from broadcast networks matching adverts to suitable consumers.

5 The target destination is specified by the STB electronic address. This overcomes any data protection legal issues as at no time are viewer's details (name, age, location, occupation etc) used or stored for later use.

10 The arrangement described is applicable to any multimedia system capable of mass audiences.

15 The whole invention is particularly advantageous because it has the additional benefit of being able to deliver accurate programme rankings and channel market share information using network embedded technology. This can be used to supplement the outmoded and inefficient measurement techniques based on random probability sampling which have been used for the last thirty years and will probably start to replace them over time.

20 Against this background, Figures 1 and 2, and incorporated text references, will now be self explanatory.

The scope of the invention is defined by the claims which now follow.

25

30

CLAIMS

1. A method of, or a system for, broadcasting inter-programme and/or  
intra-programme advertisements to a viewing or listening audience, in which a  
given advertisement's target audience profile is matched to an obtained real  
audience profile to dictate not only that certain advertisements shall be  
broadcast only between and/or during certain programmes but also that certain  
individual members of, or groups of members within, the programme-  
receiving audience may receive one advertisement, during and/or between  
certain programmes, whilst other audience members or member groups  
receive a different advertisement, in one or more of the same respective advert  
'slots', whilst watching or listening to the same broadcast.

ABSTRACTSYSTEM AND METHOD OF BROADCASTING ADVERTISEMENTS

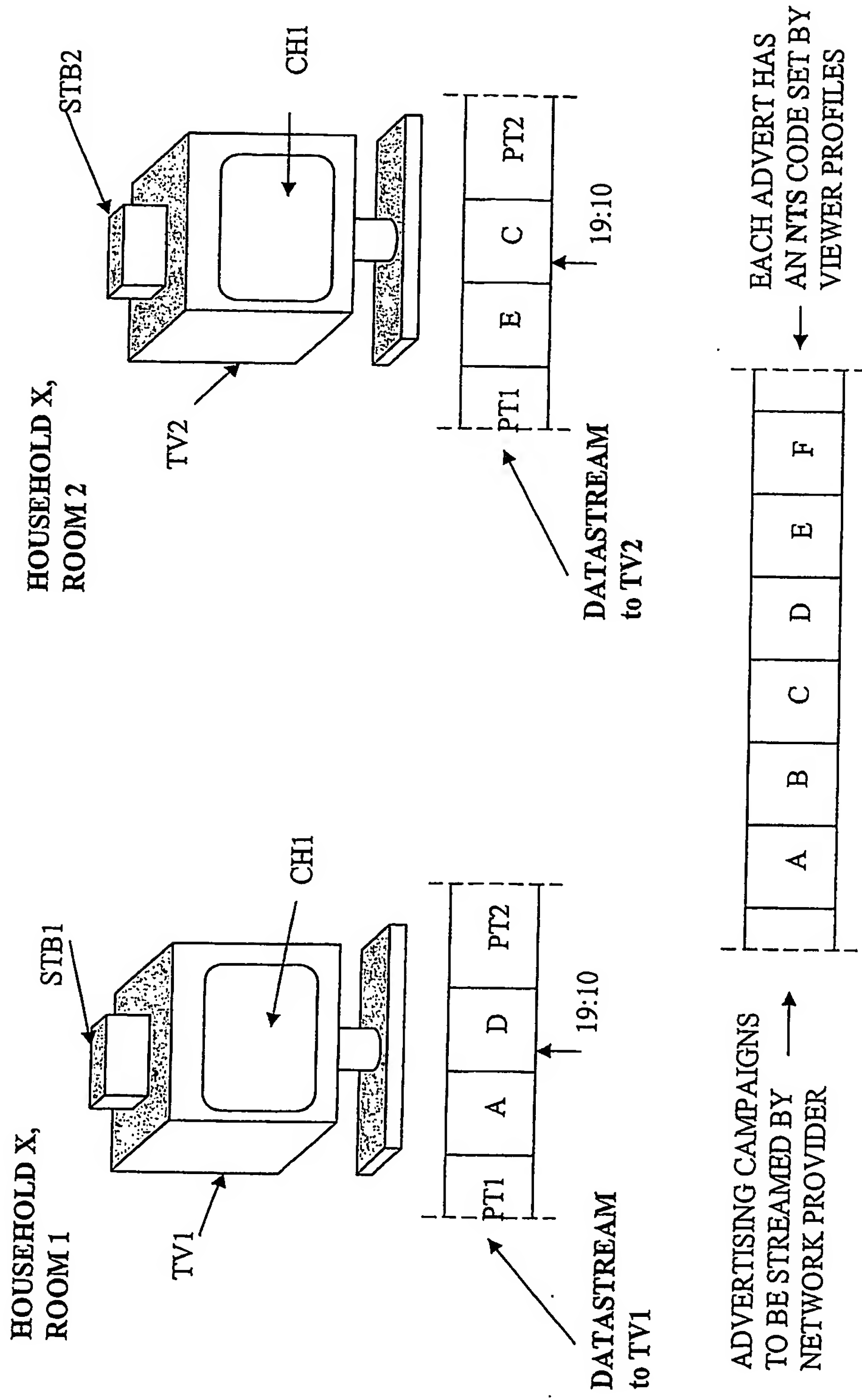
5

10

15

A method and system for broadcasting inter-programme and/or intra-programme advertisements to a viewing or listening audience is disclosed. A given advertisement's target audience profile is matched to an obtained real audience profile to dictate not only that certain advertisements shall be broadcast only between and/or during certain programmes but also that certain individual members of, or groups of members within, the programme-receiving audience may receive one advertisement, during and/or between certain programmes, whilst other audience members or member groups receive a different advertisement, in one or more of the same respective advert 'slots', whilst watching or listening to the same broadcast.

(Figure 1 best illustrates the invention).





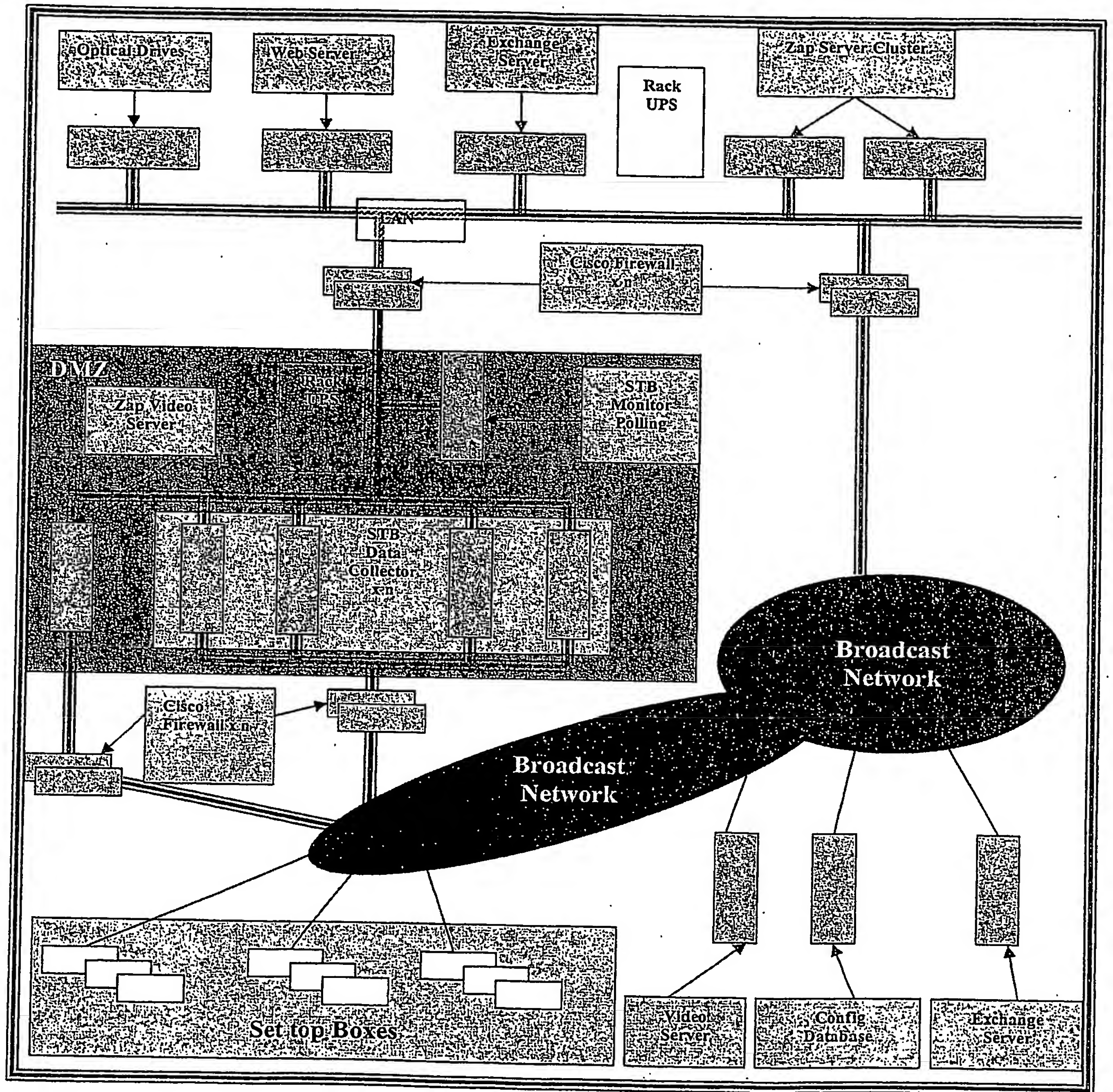


FIGURE 2

**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

**BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☒ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☒ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.**